The Boston Computer Society

SINCLAIR-TIMEX USER GROUP NEWSLETTER

WINTER '85

Why is this non-news article on the front page of this much delayed **BCS S/TUG Newsletter** ? Perhaps because every word in it comes either from your erstwhile editor with the exception of John Connell's effort, from the perennial Mike Coughlin, who is not even a member, or from some other newsletter received in exchange. It seems that our membership is quite simply doing nothing. Or at least nothing they want to share with the wide-world. There has been continual request for a newsletter, and a few volunteers to "help" out, but no news!

Things have got to change. The membership will have to take more responsibility for this publication. We need a brief but accurate record of each meeting. The volume of exchange newsletters requires that readers review past issues to glean information. And someone out there must be using software the rest of the group hasn't heard of.

If we hope to keep some interest in the original ZX machines and the hundreds of TS1000's gatrhering dust around the region, members will have to let us know what, if anything, they're still doing with them. (Mine is running an Avalon Hill game I got for $2.00 at Uni-Tech without the instructions. Anybody out there have the rules to "Midway"?)

What's happened to the FORTH phreaks ? We know you're out there somewhere ? Have all the educators who thought really cheap computing might be a good idea given up ? Can our orphans be made to interface with some of the newer machines and find a future as satellite systems ? We keep hearing about amazing hardware kluges from Dave Miller; is no one else fiddling about with ZX/TS equipment ? The machine code group is still meeting. Who's going to write up their proceedings ?

Anyone having material to submit for this publication please get unfolded typed copy in column-format to me for the next (and hopefully not the last) newsletter, which will come out in May.

And finally, if we are to have more than four 4 page publications a year, containing anything more than recaps of past meetings and the odd tidbit, someone is going to have to contact the remaining Timex/Sinclair suppliers and other appropriate sources to garner advertising.

I'm waiting. Will Stackman Editor? 168 Raymond St. Cambridge MA 02140 (617) 547-0655

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It would be pleasant to report that the new year has brought some new hopes onto the scene one year after the demise of the the Timex Computer Corp.. Higginbottom still remains a rumor; a less and less believable one in the face of the impending Commodore/Atari price war. Various suppliers, notably Games to Learn By in CT., and Zebra Systems in NYC. continue to offer what limited support is available. "Spectrumizing" your 2068 will allow you access to a great deal of software, much of which must be purchased by mail from the U.K.. However, hardware peripherals are best run using the Timex buss. Telecommunications is becoming popular but without even one local T/S BBS, this does little to advance the cause. And very little has been done to access the advanced capabilities of the 2068 (all that memory, 64 or 80 column screens, sophisticated sound). A number of dedicated users are out there, but without surrounding support and hope for some recognition, let alone gain, things seem to be stagnating. Which is why this newsletter has very little news.

The Very Late August issue of the Triangle Users Group from VA. arrived for Xmas (We're not the only ones behind.) Contains a utility for printing sideways from Dick Scoville, ditto a review of 2068 FIG Forth put out by Hawg Wild Software from Little Rock which suggests some serious limitations to this implementation. For one thing it's slow!

The following tips, aids, hints were compiled by Geo.Mockridge in TIMELINEZ from the San Francisco Bay Area.

POKE 23609,100 Actually any number between 0 and 255. This will change the sound each keystroke makes from Click to Beep and beyond.
POKE 23692, 255 Use before every PRINT and defeat the scroll.

POKE 23658,8 To get Caps Mode.
POKE 23658,0 To go back to U/L.

POKE 23561, n (n = 1 to 35) to control repeat time for key-strokes. 10 to 15 for text.

Try USR 15002 to get out of an INPUT loop (without crashing?)

DIM a$(704) : PRINT AT 0,0; OVER 1; PAPER x; INK y; a$ will allow a change of paper and ink without clearing the screen.

The new Zebra Systems Catalog is available, quite extensive, and listing a new low price for the Koalapad and some fancier drawing software for the same. The Zebra Talker with Text to Speech software is also available at a comparable price. Modem users (see John Connell's article) may want to checkout LETTERITER/BUFFERITER which is a wordprocessor specifically designed to interface with the 2040 printer and the 2050 Modem. The adventurous may want to get a Spectrum 3 ROM and try their own conversion. Write to Zebra Systems, Inc., 78-06 Jamaica Ave., Woodhaven, N.Y. 11421. Their BBS is up M-F 5:30 pm to 9 am, Sat, Sun. & Holidays at (718) 296-2229.

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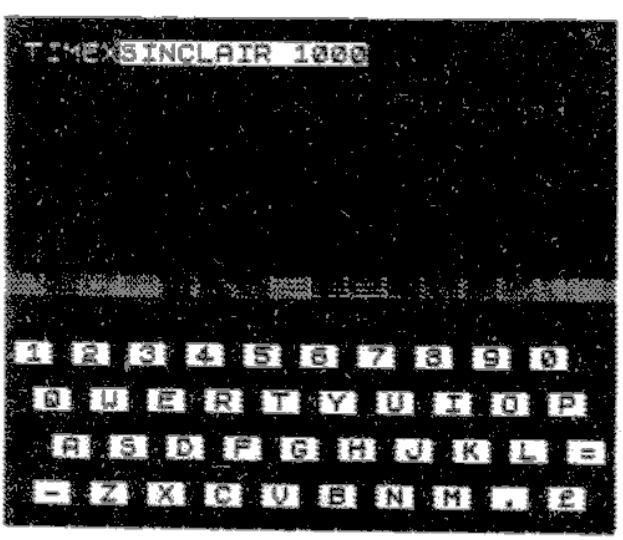
BANTA Software in California offers two routines to check if the 2040 printer is on.

For ZX81/TS100/1500;

```
1  REM (= CLS ?ACS STAN
2 POKE 16516,71
9996  LET PRT = USR 16514
9997  IF PRT )16383 THEN  PRINT  "
PRINTER OFF"
9998  IF  PRT (=16383  THEN  PRINT
"PRINTER ON"
9999 STOP
```

FOR TS 2068;

```
1 REM FLASH CLS G THEN LN ()
2 LET PRT = USR(s+PEEK  23635+256*
23636)
9997  IF  prt  )16383  THEN  PRINT
"Printer off"
9998  IF  prt  (=16383  THEN  PRINT
"Printer on"
9999 STOP
```




```
LOADING TI
FLAS
BONU
WIER
3D PLAN
SELF LIS
CHARACTER SET BANDAN
1K TEX
TAPE UNLOCKE
STANDARD MC LOADE
BEEP AND PHASO
TRY THI
JUST FOR FU
SINE
LOG
PAC
68 LINE
FLOWE
ETCHSKETC
SPEED LANDER
DODG
KEYGAM
TOUCH TYP
STATISTIC
SLOP
FN PLO
NICH
SUPER FN PLO
EXTENSION TO ..

MULTIPLE PROGRAMS IN MEMOR
PRINTER HI RE
MAGAZINE
MAGAZINE
CUBIC MAZ
DRAGON'S DEAT
OSCILISCOP
16K TAPE UTILIT
16K ASSEMBLE
TEXT
TEXT 2,
TIMEX SINCLAIR 100
JRC POSTE
PRINTER HI RE
```

SIDE II

JEB IN SCOTTSBURG, INDIANA SENT US THEIR SUPERTAPE TO REVIEW. THE CATALOG ABOVE WAS PRINTED OUT BY THE FIRST PROGRAM, A NAME READER. THIS COLLECTION IS A REAL SMORGSBORD AND SINCE ITS RECORDED ON BOTH SIDES LOADING CAN BE TRICKY. THIS NOTE WAS TYPED USING TEXT EDITOR 2,3 WHICH CAN BE ADAPTED FOR 80 COLUMN OUTPUT. THE IMAGE BELOW IS ONE OF THE CURIOSITIES ALSO INCLUDED. DOCUMENTATION IS SPARCE, SPELLING VARIABLE, BUT ON THE WHOLE, AN INTERESTING CONGLOMERATION.

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MODEM NOTES

The software supplied with the Westridge 2050 Modem only lets a TS Computer act as a "dumb" terminal, a receiver with no memory. Anything to be saved must be copied from the screen on a 2040 printer.

The so-called "Smart II" software for the 2068, by contrast, allows the computer to store up to 27K bytes of information received. Text can then be reviewed on screen later, printed out on any compatible printer, or saved onto tape.

This software also allows the user to transm,it previously prepared text material either from software memory (editable only by backspace deletion) or from textfiles prepared on a word-processor (e.g. Tasword) and loaded into memory for transmission.

The following hints suppose that you have worked with your 2050 after carefully reading the manual, and that you are proficient in 2068 "BASINC".

1) The memory (called 'the buffer' in the manual) starts at decimal location 26710, the same location where BASIC programs start. Programs will therefore be contained in the 'buffer'.

2) Then, to print out a buffer of say 5000 bytes, one would enter

```
FOR n=26710 TO 31709: LPRINT CHR$ PEEK n;: NEXT n
```

To save this data to tape, enter

```
SAVE "buffer" CODE 26710, 5000
```

3) The text you receive (from other computers) will contain CR (carriage returns, ASCII 13) and sometimes LF (linefeeds, ASCII 10) as well. "Smarterm II" lets you suppress either or both of these. If you plan to printout the 'buffer' later on a full-width printer, the results look best with linefeeds suppressed (LF suppression: ON) but carriage returns left on (CR suppression :OFF)

4) CON, whatever that is, should be set to NONE.

5) Sometimes prepared text will not have a CR at the end of each line. Tasword, for example, does not.It also has unwanted space between paragraphs. Possible solutions include using a symbol (such as #) to denote CR and copying the text byte-by-byte using BASIC, ie first POKE 13 anywhere there's a #, then suppress all spaces (ASCII 32) after a #. In other words, reprocess your prepared file before dumping it to memory for transmission.

6) When transmitting such text to a mainframe, the first few bytes after a CR can be garbled. Inserting a dozen ASCII 0's (no operation). after each ASCII 13 (CR) gives the big one time to catch up (or something like that).

The Westridge 2050 Modem makes it quite feasible to use your TS 2068 for both recreational computing and communicating with that mainframe at work an hour's drive away. Try out the BCS BBS at (617) 646-3610 (when it's up) or more reliably, Yellowdata at (617) 489-4930.

John Connell (413) 596-6869

```
10 PRINT CODE CHR$ RND;
20 GOTO 10
```

```
10010001111101110010100000010110
00011000100000001100100111001000
00000101010101101001111001010011
00110010111110011011101610000001
10100101001110100111000000100111
11110010110110110000010011110101
```

NEED A FEW COIN-FLIPS ?

7) If you try to transmit 5000 bytes of text previously prepared and loaded via CODE 26710, 5000, you will discover unfortunately that your Westridge Modem will not cooperate.
It seems that Smarterm II doesn't believe that the buffer contains your text i.e. BUFUSD must equal 5000 or more. I have not yet discovered where to POKE this value.

Instead I fill the buffer with enough bytes, say 5000, before loading the actual text. No, you don't nave to type "x" 5000 times. There's a trick.

Turn off your modem. Switch duplex to half. Write a few bytes, say "abcdefghij"; BUFUSD now equals 10. Transmit this "buffer". Since the modem is off, "tranmission" is very fast; and the 10 bytes are copied into the buffer because the setting is half duplex. BUFUSD has been doubled. Repeat this process, BUFSD is doubled again and now equals 40. Ten such "transmissions" will quickly fill the buffer with 5120 bytes.

You may now load and transmit your text. Good luck.
J.C.

```
   1 REM <= CLS ?ACS ETAN
   2 POKE 16515,71
9996 LET PRT=USR 16514
9997 IF PRT>16383 THEN PRINT "PR
INTER OFF"
9998 IF PRT<=16383 THEN PRINT "P
RINTER ON"
9999 STOP : REM FOR TS1000
```

```
   1 REM FLASH CLS G THEN LN <>
9996 LET prt=USR (5+PEEK 23635+2
56*PEEK 23636)
9997 IF prt>16383 THEN PRINT "Pr
inter Off"
9998 IF prt<=16383 THEN PRINT "P
rinter On"
9999 STOP : REM for 2068
```

MORE 2068 TIPS 'N HINTS

Got a long load. If you don't want auto-run, add BEEP to the SAVE instruction, ie SAVE "Longload": BEEP 5,1. If you want auto-run, make the target line a BEEP.

Want SCROLL for your 2068. Try POKE 23692, 1 or 2 where you'd scroll on a ZX81.

Problems with non-compatibility between Spectrum software and the various adapters (ROMSwitch, Chameleon, etc.) have been traced to 10K ohm pill-up resistors used in the Spectrum to insure that IN statements from the keyboard read 255 when no key is pressed. The Timex keyboard is different. Most converters can be modified with approriate resistors; some newer models already have been.

BASIC software incompatibility is often due to a difference in RAMTOP. 16K programs are particulary vunerable. Consult approriate manuals for necessary modifications. (An article would be welcome.)

An Atari-compatible trakball can be adapted for use with 2068 by cutting the trace from pin 7 and then run a jumper from pin 7 to GND (Pin 29 on the Z-80 can be used). This will not change joystick performance as this line is supposed to be logical low which GND will supply.

Now that cheaper RBG monitors are appearing (Panasonic composite/RBG have been seen for around $200 !) E.Arthur Brown's Interface($19.95) may be a good investment although tinkering seems to be required. Be prepared to adjust your "pots". The Sears monitor and its accompanying cable seems to be the easiest to use. (Cost around $350 on sale)

BRAND-X

Over a year ago, TRS announced the MC-10, a miniature color computer with a tokenized BASIC probably intended to compete with our TS2068. Marketed with no apparent enthusiasm and even less support, this computer became an "orphan" almost immediately, selling at reduced prices where available.

Comparison with the 2068 are instructive. Both keyboards have real keys, but MC-10 has only 3 functions a key, with "control" to the left used for tokens and "shift" to the right for punctuation and graphics. Although it can be expanded to 16K RAM, the MC-10 starts off with only 3,142 bytes RAM due to the Micro-Color system.

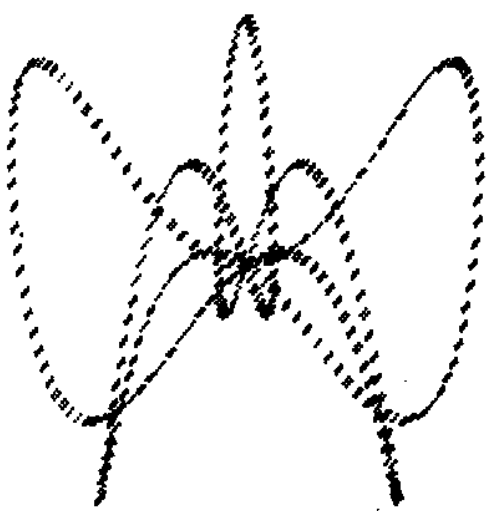
Its color capabalities are very limited, of course. The only text screen is a rather ghastly green with black letters - no changes possible. Only lo/res block graphics can be used with pixel color. In fact, despite the ingenuity of this miniscule system, color is probably best avoided on this computer.

However, since the whole system was sold for under $100 minus printer ,(a small thermal with moving head),perhaps other virtues might be found.There is a RS23c interface for modems and printers. Cassette mass storage is as fast as the 2068, but there is no Verify command. In fact, the Remote Control shut-off included on the special hook-up cord required is not implemented. But a RESET button is built in! Many TRS BASIC programs can be used (although none can be loaded from the CoCo). Error messages are two letter abbreviations and useful. The SOUND function is comparable to BEEP.

These limited capabilties might still make this a usable teaching machine, but the implementation of BASIC and the lack of a line editor precludes even this use. Keyboard layout is "logical" but barely functional. DIM, DATA, & REM have not been tokenized, while functions such as SGN and LOG are. The arrow keys, in the absence of an editing system, are almost irrelevant.

So why should we care? TS2068 is incontrovertably the better computer and about as available. The same number were probably sold. There is much more TS user and 3rd party support; there is even more residual manufacture support for the TS068.

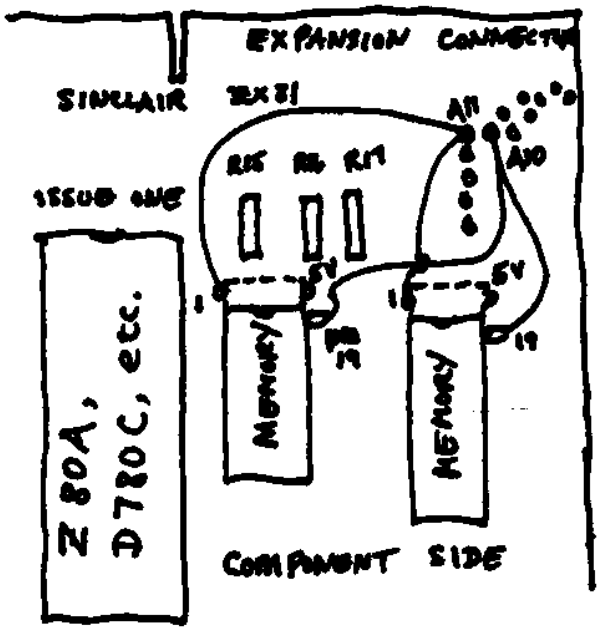
Quite simply, there are no token ized popular machines currently marketed. Commodore BASIC permits a curious set of abbreviations. There are utilities which allow assigning function keys, etc. to speed typing in other systems. But those of us who prefer programming to typing have few options. The failure of the MC-10 and the demise of TIMEX leaves the aging QWERTY keyboard as the default computer input once again. Whichis one more reason to wait for the QL. Maybe there'll be a Dvorak version with tokens moved as well.



MORE ON-BOARD MEMORY FOR ZX-81/TS-1000

New memory chips are available that reduce the need for the wobbly RAM pack. The original ZX-81 used two 1k x 4 bit RAM chips while the TS-1000 uses one 2k x 8 chip. While 8k x 8 memories are available, they are expensive (about $40) and hard to install since something must be unsoldered.

Inmos Corp. makes a 4k x 4 memory which can easily replace the two small memories that are used on most ZX-81's. The IMS 1420-10L sells for $8.35 in small quantities. Only three pins must be changed on each new memory. Find two 20 pin DIP sockets whose pins will plug into the old memory sockets.



Bend pin 19 of the new sockets so they stick out to the side and not connect to old pin 18. Then plug the new sockets in the old so the overhanging end is towards the edge connector, as shown in the dotted lines in the diagram. Pin 20 is soldered to the 5 volt supply (a short connection), while pins 1 and 19 are soldered to A11 and A10. I used fairly long connections, as shown, but you could find a shorter connection with a little searching.

Plug in your new memory chips and test. You should notice an increased delay for the reversed K to appear. The command

```
PRINT PEEK 16389*256 - 16384
```

will return 4096 if everything is working.

If you decide to remove the old sockets and install new ones (not a job for the beginner), be sure to use 22 pin sockets, even though you will have to bend 5 pins out of the way. Why? Because someone is going to make a 16k x 4 memory chip.

If this article has really inspired you to do a memory modification, remember Mostek is selling a 32k x 8 bit memory in a 28 pin package. It souldn't take many changes to the Sinclair/Timex board to make it fit. Price is supposed to be around $50, part number is MK4856.

J mc

TIMEX/SINCLAIR
GAMES TO LEARN BY

Charles Warner
P.O. Box 575
2 South Street
Williamsburg, Mass. 01096
413-268-7505

David Duhay
P.O. Box 78
28 Claire Hill Rd.
Collinsville, Ct. 06022
203-673-7089

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-40- TS/1500
1000

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